Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) An apparatus of transmitting packets, comprising:

a plurality of line cards which have interfaces for transmitting and receiving packets;

switches connected to said plurality of line cards;

a plurality of extension function processors connected to said switches, the extension function processors performing processing to be executed on a higher layer than a layer on which a received packet is transferred; and

a statistic information collecting processor connected to said switches, said statistic information collecting processor including means for analyzing header information imparted to said packets, and means for counting an amount of packets to be transmitted or received through said interfaces,

wherein said statistic information collecting processor predicts the amount of packets to be received by said plurality of interfaces from said header information and said amount of packets which have been analyzed, and

wherein on the basis of said predicted amount of packets ~~predicted~~ received by all of the line cards, an extension function processor to which the packets are transmitted is selected from the extension function processors and implements processing on the packets so as to allocate to each extension function processor uniformly an amount of traffic that is processed in each extension function processor.

2. – 3. (canceled)

4. (original) The apparatus of transmitting packets according to Claim 1, further comprising a bus for directly connecting said interfaces and said statistic information collecting processor.

5. (previously presented) The apparatus of transmitting packets according to Claim 1, wherein said interfaces for transmitting and receiving packets have means for storing, in a frame, at least a portion of plural headers imparted to a plurality of packets which said interfaces transmit and receive, and means for transmitting the frame to the statistic information collecting processor.

6. (previously presented) The apparatus of transmitting packets according to Claim 5, wherein the headers stored in said frame are multiplexed into said frame and are all equal to one another in size.

7. (previously presented) The apparatus of transmitting packets according to Claim 5, further comprising means for multiplexing into said frame the headers stored in said frame, wherein said means for multiplexing determines the length of each header portion to be extracted from a plurality of packets in response to information indicating classification of said packets which have been set to headers to be imparted to each of said packets to multiplex into one frame.

8. (previously presented) The apparatus of transmitting packets according to Claim 1, further comprising a plurality of said statistic information collecting processor.

9. (canceled)

10. (previously presented) The apparatus of transmitting packets according to Claim 1, further comprising a table provided in each of said line cards, on which a relationship of a correspondence between header information of the received packets and an output line card of the packet is described, and

a statistics table provided in said statistic information collecting processor, on which is described a relationship of a correspondence between header information of the received packets and said amount of packets.

11. (previously presented) The apparatus of transmitting packets according to Claim 10, further comprising means for renewing said table provided on each of said line cards on the basis of said amount of packets predicted.

12. (currently amended) A method of transmitting packets to be used in an apparatus of transmitting packets having a plurality of line cards, each of which has interfaces for transmitting and receiving packets and means for processing packets, the apparatus of transmitting packets further having a plurality of extension function processors connected to said switches, the extension function processors

performing processing to be executed on a higher layer than a layer on which a received packet is transferred, comprising the steps of:

receiving packets through said interfaces;

counting a number of said packets received by each of said interfaces;

predicting a number of packets to arrive at each of said plurality of interfaces in the future on the basis of said number of packets counted; and

selecting, from the extension function processors, an extension function processor to which the received packet is transmitted on the basis of said predicted number of packets ~~predicted~~, the extension function processor implementing processing on said packets so as to allocate to each extension function processor uniformly an amount of traffic that is processed in each extension function processor.

13. (previously presented) The method of transmitting packets according to Claim 12, further comprising a step of multiplexing header information of a plurality of said received packets into a frame, and

a step of transmitting the frame to the means for processing packets.

14. (previously presented) The method of transmitting packets according to Claim 13, further comprising a step of extracting only a portion of said headers corresponding to a fixed length from said received packets.

15. (previously presented) The method of transmitting packets according to Claim 13, further comprising a step of extracting a header of said received packet

only by a size corresponding to information indicating classification of said packet set to a header to be imparted to each of said packets.

16. (canceled)